

Insect and Disease Information



: includes information for residential settings



: includes information for commercial orchards

APPLE & PEAR

Fire Blight



This article was written by Extension Plant Pathologist, Claudia Nischwitz.

This spring, we unfortunately had excellent conditions for fire blight, and infected lesions are now expanding. Most infections occur when bacteria are transmitted to open blossoms by bees or rain. But infections can also occur later in the season, when bacteria oozing from existing cankers are spread by water or by using pruning tools. All the bacteria need is a tiny opening in the succulent leaf or twig tissue to enter the plant. Hail, strong winds, or even the act of pruning can wound the foliage, and bacteria splashed by water on leaves can enter through those wounds, or even through stomates on the underside of the leaves.

Some varieties, such as Fuji and Gala apples, and Bartlett Pear, are more susceptible than others. On susceptible trees, the bacteria will move through the vascular tissue more quickly, from the infected shoot toward the main trunk. More and more of the branch will die as time progresses. Eventually, when the bacteria reach the trunk, the tree may die.

Pruning of infected shoots is an excellent way to reduce fire blight in an orchard. In the spring, removing infected shoots soon after the symptoms appear reduces dieback, as the bacteria will be stopped before they can move too far inside the branch. Since visible symptoms lag behind the advance of the bacteria, infected branches should be cut 12 inches beyond the visible dead shoot to remove all bacteria and stop the infection.

It is important to decontaminate the surface of pruning tools using disinfecting wipes or dipping the blades in a 70% alcohol solution between cuts. In the USU plant pathology lab, we tested disinfecting wipes for cleaning tools as well as bacterial spread through pruning cuts. We found that wipes removed over 90% of the bacteria that had previously been sprayed onto the blades. To test spread of bacteria via pruning tools, we contaminated blades with a bacterial solution and cut

branches. Almost 50% of the branches cut with contaminated blades became infected. None of the branches cut with clean blades did.

STONE FRUITS

Greater Peachtree Borer



peach, nectarine, apricot, plum



The key identifying features of greater peachtree borer are that the veins of the wings and the moth body are both dark black, and have a blue metallic shimmer.

If you live in the warmer areas of Salt Lake County, it is now time to start treating for greater peachtree borer, if this is a pest of concern in your area.

A few observant growers have notified us about possibly catching peachtree borer in their monitoring traps in the last few days. We did confirm the presence of peachtree borer in one of those traps located in South Jordan.

The Utah IPM Program maintains peachtree borer traps in 14 locations in northern Utah: in Cache, Box Elder, Davis, Utah, and Weber counties. None of these have trapped moths. We truly appreciate the notifications from our readers, especially since we do not have traps up in the Salt Lake County area.

We still expect that the moths will start to fly between the third and the last week of June in the other areas along the

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Wasatch Front. As soon as we start to catch them, you will be notified that it is time to start your trunk sprays. Or please let us know if you have a trap and you see some.

One challenge with using a monitoring trap for greater peachtree borer is that the lure is a "general" lure for all clearwing moth species. The lilac-ash borer, which emerges just before the greater peachtree borer, is very attracted to the lure. The pictures below show examples of other clearwing species that may be caught in the trap.



Lilac-ash borer



Poplar-willow borer



unknown borer

There is a USU Extension video on monitoring for greater peachtree borer, and identifying it in a trap, which can be accessed by [clicking here](#). Keep in mind that using traps is for monitoring purposes only, not for controlling this pest.

Commercial treatment (and days between sprays):

a few options are Lorsban (one spray only; do not touch foliage), Asana (21); products containing permethrin; Isomate-P mating disruption

Residential treatment options (21-30 days between sprays):

products labeled for peaches that contain permethrin or bifenthrin: Bonide Borer-Miner Killer, Enforcer Outdoor Insect Killer, Hi-Yield Broad Use Including Gardens; Lilly Miller Multi-Purpose Insect Spray

Obliquebanded Leafroller

sweet and tart cherries

In Utah, leafrollers are primarily a concern for cherry growers. The larvae do not directly feed on the fruit (they prefer the leaves), but as cherries are harvested, they can fall into the bins, contaminating the crop. Leafroller larvae have become more of a problem with the switch away from Guthion for cherry fruit fly control.

The first leafrollers were trapped in Utah County, setting a biofix of June 12 - 14 for most locations. See the table on the next page for treatment timings, which will depend on the material you choose to use. Materials that are *italicized* will also treat cherry fruit fly.

Esteem and Rimon are insect growth regulators that, if used, should be applied near the start of egg laying to kill existing eggs, and eggs laid later. The next timing option is at 350 DD after biofix, just before larvae begin to hatch. At this timing, Intrepid will kill existing egg masses, as well as any larvae that consume the chemical. Intrepid can also be used at the next timing, 400-450 DD after biofix, along with a host of other products, including *Delegate, Altacor, pyrethroids, Success! Entrust, Voliam Xpress, or Imidan*. (Imidan is least effective.)

If you are growing fruit organically, use *Entrust* at 400-450 DD, or use Deliver (Bt) at the 450 DD timing. Deliver is applied later because of the short residual of this product. It should be applied with good coverage (it must be consumed).

Products that have 14 or more days of residual (Delegate, Altacor, pyrethroids, etc.) may require 1 additional application, while products like spinosad or Bt may require 2 or 3.

OBLR overwinters as young larvae in protected areas of the tree canopy. They start feeding in spring, when leaves emerge, and then pupate to adults. The moths we have started trapping are from the overwintering larvae.

Treatment Timing for Obliquebanded Leafroller, Utah County, based on degree day model out of Michigan. This information can also be found by using the Utah TRAPs website: climate.usu.edu/traps (Italicized materials also treat cherry fruit fly.)

NOTE: For all locations, the date when larvae complete feeding is after July 18 (the farthest out we can predict).

Utah County Location	Date to Treat Based on Material Used			
	Esteem, Rimon (100 DD)	Intrepid (350 DD)	<i>Delegate, Altacor, Intrepid, pyrethroids, Success/ Entrust, Voliam Xpress, Imidan</i> (400-450 DD)	Bt (Deliver) (450 DD)
American Fork	June 15	June 26	June 28 - 30	June 30 - July 1
Genola CHF Gala	June 15	June 25	June 27 - 29	June 30
Genola South - McMullin	June 16	June 26	June 28 - 29	June 30
Goshen	passed	June 21	June 23 - 25	June 26
Lincoln Point	June 15 - 16	June 26	June 28 - 29	June 30
Orem (Lindon)	June 16	June 27	June 29 - July 1	July 2
Payson	June 16	June 28	June 30 - July 2	July 3
Santaquin - South Ridge	June 16	June 26	June 29 - 29	June 30
Santaquin East - Wall	June 14	June 25	June 27 - 28	June 29
Santaquin West - CHF North	June 16	June 26	June 28 - 29	June 30
Tintic	June 18	June 29	July 1 - 3	July 4
West Mountain - Wall	June 16	June 28	June 30 - July 2	July 3
West Mountain Center - McMullin	June 16	June 26	June 28 - 29	June 30
West Mountain South - Orchard View	June 16	June 26	June 28 - 29	June 30

The recommendations provided above are based on research out of Michigan State University. USU Entomologist, Dr. Diane Alston, has submitted a grant proposal to conduct research on leafrollers in Utah in summer 2014. We would like to confirm whether or not obliquebanded leafroller is the most predominant leafroller, and if so, to validate the degree day model.

BERRY FRUITS

Raspberry Horntail



Raspberry horntail adults are emerging now in most areas of northern Utah, and in the cooler areas (Cache, Carbon, Uintah, Wasatch counties), adults will start to emerge this weekend. Growers that have had good luck with a spray targeting adults should apply a treatment now.

Precautionary Statement: Utah State University Extension and its employees are not responsible for the use, misuse, or damage caused by application or misapplication of products or information mentioned in this document. All pesticides are labeled with ingredients, instructions, and risks. The pesticide applicator is legally responsible for proper use. USU makes no endorsement of the products listed herein.

Adults lay eggs laid toward the top half of raspberry canes. Larvae feed within the stem tissue, working their way up. Much of their time is spent near the tops of canes, causing the classic terminal wilting symptom. Toward late summer, the larvae move back down the cane to spend the winter, and then pupate the following spring.

This pest is very common in Utah, and although fields can tolerate a moderate population, it is a frustrating one to manage. The challenge is that the adult inserts her eggs under the epidermis of the cane, so insecticides must target the adult. Add to that the fact that the adults are elusive and rarely seen, and you can see why patience is required with this pest. Luckily, there are several parasitic wasps in the ichneumonid family that help in managing the horntail.

If you choose to spray, a repeat application may be required, as adults will be active through to the end of summer. If you need to spray at or near bloom time, do so at night when bees are not active.

Commercial and Residential treatment: Apply carbaryl (Sevin) at least twice, spaced 2 weeks apart. In addition, monitor raspberry canes starting in early July for terminal wilting, and prune out (or squeeze to kill) the portion with the larva inside.

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